

## Accessory Hepatic Lobe in Right Lumbar Region - An Incidental Finding

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### ABSTRACT

An accessory lobe of liver is a rare congenital anomaly which can be detected incidentally or can even present as acute surgical emergency due to torsion. We report a case of accessory hepatic lobe in right lumbar region in a 21 years old female who came for a ultrasound abdomen for lower abdominal pain. We report the importance of ultrasonography and Computed Tomogram (CT) scan for the diagnosis of accessory hepatic lobe.

**Keywords:** accessory hepatic lobe; liver; CT scan.

### INTRODUCTION

Accessory hepatic lobe is an extremely rare anomaly. It is mostly congenital, but can also be acquired.<sup>1,2</sup> Most cases of the accessory liver lobes are not detected since they do not cause any symptoms and can be found incidentally.<sup>3</sup> However, they can give rise to various clinical symptoms like recurrent abdominal pain, impaired liver function or torsion if situated in the abdomen.<sup>1</sup> It can also mimic as a pulmonary tumour along with symptoms of chronic cough if situated in the lung.<sup>4</sup>

Here, we report a case of accessory hepatic lobe which was diagnosed incidentally during ultrasonogram (USG) examination for vague lower abdominal pain. This case report highlights the role of USG and CT scan for the diagnosis of accessory hepatic lobe in incidental cases.

### CASE REPORT

A 21 year old female presented with complaints of non-specific lower abdominal pain for 4-5 days. She didn't have any other symptoms. She was sent to Radiology department for ultrasound examination of abdomen and pelvis. USG showed a mass measuring about 6x8x6 cm in the right lumbar region. The mass was well defined situated inferior to the liver with echotexture similar to

liver. There were portal veins with echogenic wall, hepatic veins with non-echogenic/imperceptible wall and accompanying biliary tree. This led to the suspicion of accessory hepatic lobe hence multi detector computed tomogram (MDCT) was performed.

MDCT showed liver with normal echotexture (Fig. 1) and an accessory liver (Fig. 2,3) in the right lumbar/ infrahepatic region measuring 6.2x8.3x6cm. This lobe was supplied by a branch from the superior mesenteric artery. Portal venous drainage was from posterior- superior aspect joining the main portal vein at the porta (Fig.4). Hepatic drainage was from antero-superior aspect joining the middle hepatic vein in its antero- inferior aspect. Biliary drainage was seen along the hepatic vein. This lobe was seen displacing the hepatic flexure of colon. Superior mesenteric vein was seen anterior to the psoas muscle, antero-medial to right kidney and joining the tortuous splenic vein. Moderate splenomegaly was present. Tortuous course of the portal vein was also noted. Rest of the organs like liver, gall bladder, pancreas and both the kidneys were unremarkable.

A radiological diagnosis of accessory liver in the right lumbar region was given. As the patient did not show any

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torsion, acute abdominal complaints, necrosis and other features related with the accessory liver, so surgical intervention of the mass was not performed.

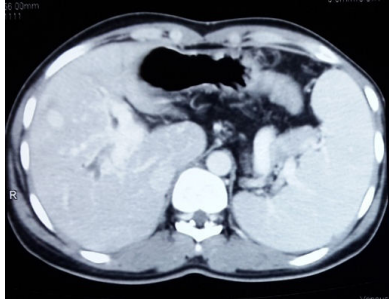


Figure 1. CT abdomen axial section showing liver.

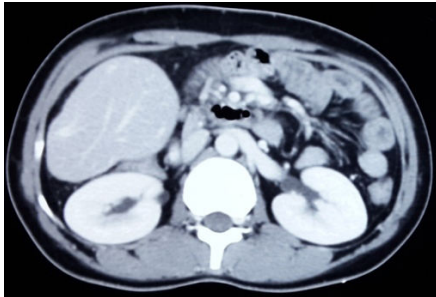


Figure 2. CT abdomen axial section showing accessory liver with same attenuation.



Figure 3. Coronal reformat image showing accessory liver in right lumbar region.



Figure 4. Coronal reformat MIP image showing portal vein connection of accessory liver with parent liver.

### DISCUSSION

An accessory lobe of liver is a rare congenital developmental anomaly that is usually asymptomatic and is seen as an incidental finding.<sup>1</sup> Most abnormalities of the liver due to accessory lobes are without clinical significance and are found either at necropsy or at the time of operation for another condition. These accessory lobes may be attached to the liver by liver parenchyma or by a mesentery. If attached by a mesentery it is necessary that it must contain hepatic artery, hepatic vein, portal vein, and a bile duct in order to function.<sup>5</sup>

Our case also showed a well defined mass with arterial supply from superior mesenteric artery and venous drainage was from the posterior-superior aspect joining the middle hepatic vein. Biliary drainage was also noted.

An accessory liver is adjacent and attached to the liver by its own mesentery, while an ectopic liver is one that is completely detached from the normal liver parenchyma. Older literature has described four types of accessory liver: big accessory hepatic lobe (> 30 g), small accessory hepatic lobe (< 30 g), ectopic lobe with no liver connection, and microscopic accessory lobe in the gall bladder wall.<sup>1</sup>

Classification can also be based on the biliary drainage and the presence or absence of a common capsule:

Type I. The separate accessory lobe duct drains into an intrahepatic bile duct of the normal liver.

Type II. The separate accessory lobe duct drains into an extrahepatic bile duct of the normal liver.

Type III. The accessory lobe and the normal liver have

a common capsule; the bile duct of the accessory lobe drains into an extrahepatic duct.<sup>6</sup>

The importance of this entity is that it can be misdiagnosed as an intra-abdominal mass, stromal or peritoneal sarcomatous tumor and wandering spleen. It may be presented with acute abdominal pain because of pedicular torsion resulting in necrosis. This is a common event leading to the detection of an abnormal abdominal mass. Bleeding, malignant degeneration, and trauma are also described.<sup>1,7,8,9</sup> In the lung, it is often misdiagnosed as pulmonary tumor, and sometimes as pulmonary sequestration or hydatid cyst.<sup>4</sup> So, misdiagnosis of such cases often leads to potentially unnecessary or inappropriate resection of the liver tissue.<sup>4</sup>

In our case, the lesion was seen in the right lumbar/ infrahepatic region. The MDCT images showed the liver connection and the portal venous circulation which made the hepatic origin of the lesion clear. Patient did not have any complications related to the accessory hepatic lobe, hence surgical intervention was not done.

In conclusion, it is important for the radiologist to be aware of this entity. Though rare, proper inspection of vascular and biliary drainage of the liver can give the diagnosis of accessory hepatic lobe in the CT scan when a mass is present in the right lumbar region. If intra abdominal mass is suspected, accessory hepatic lobe should also be kept in differential diagnosis to avoid unnecessary surgical interventions.

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